2019 LKFT status

Intro: LKFT Today

- Architectures: arm32, arm64, i386, x86_64
- Hardware: X15, DragonBoard 410c, Juno, HiKey, x86_64 servers
- QEMU: x86* on x86_64 servers, arm* on SynQuacer arm64 hosts
- Linux Branches:
  - LTS: 4.4, 4.9, 4.14, 4.19
  - Latest stable (5.3), mainline, next
- Tests: LTP, libhugetlbfs, perf, v4l2, kvm-unit-tests, s-suite (i/o benchmark), kselftests
- Most tests run in all environments on every push for a total of ~25,000 tests per push.
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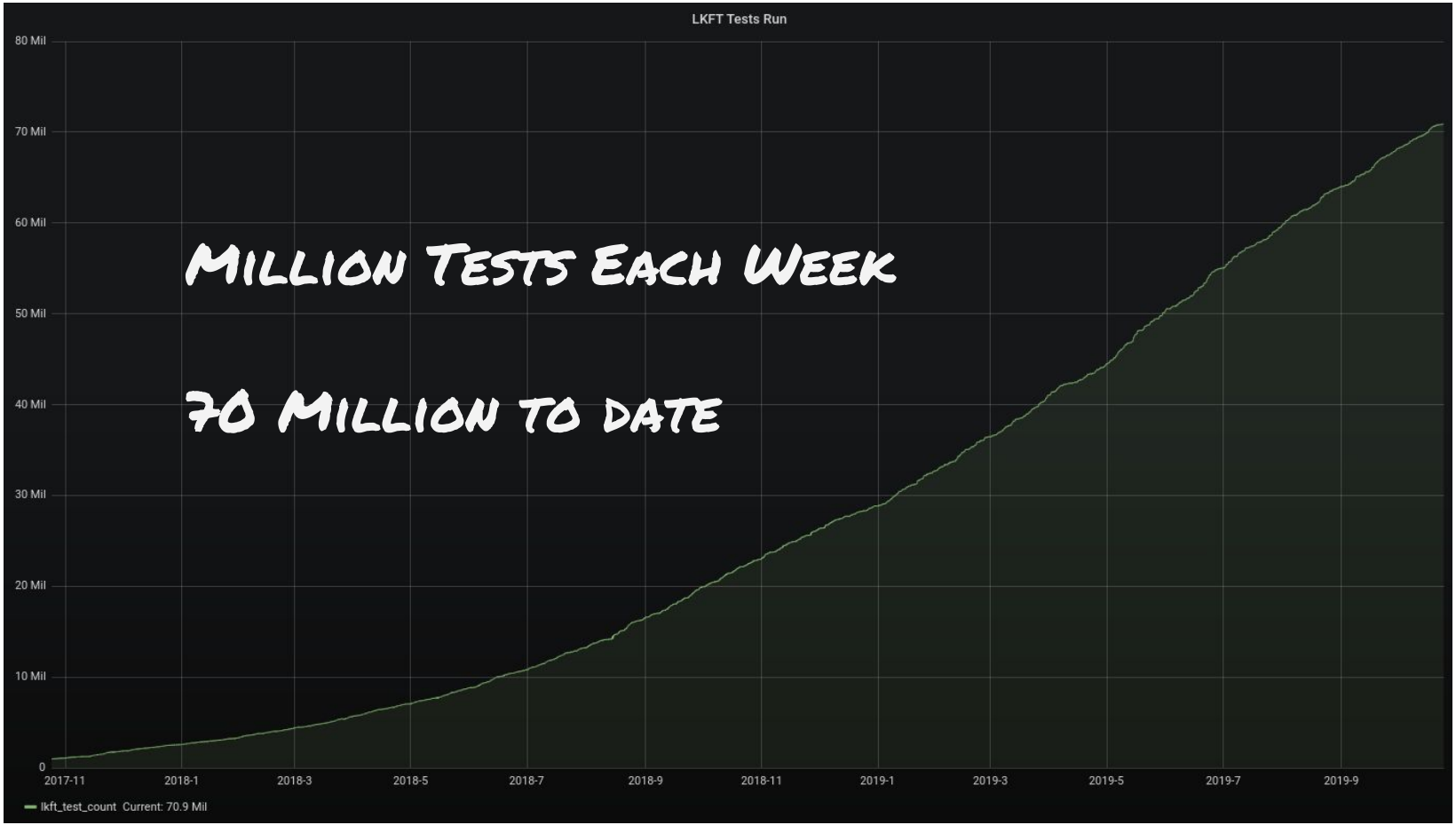
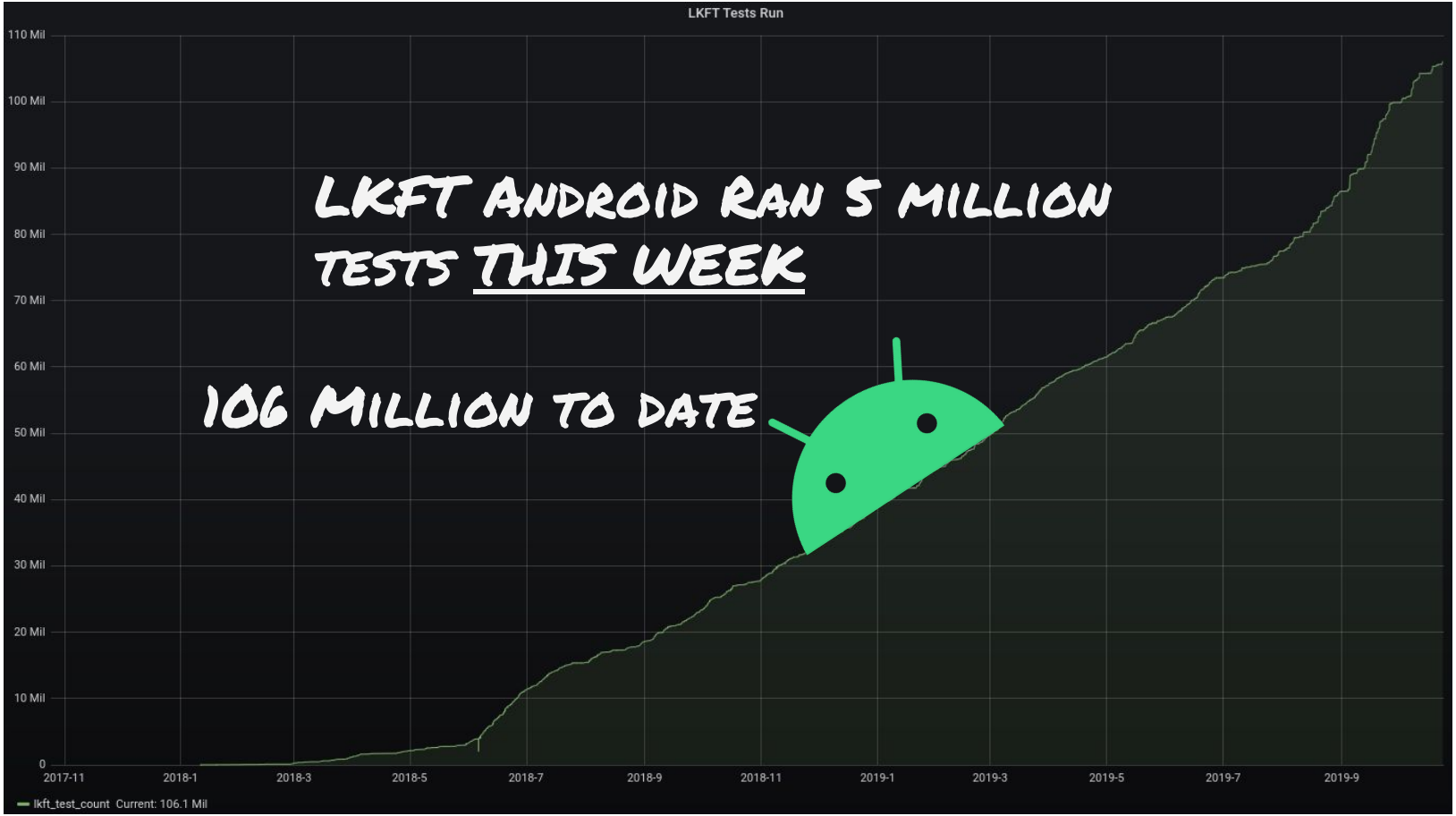

LKFT Tests Run
80 Mil
70 Mil
60 Mil
50 Mil
40 Mil
30 Mil
20 Mil
10 Mil
0
2017-11
2018-1
2018-3
2018-5
2018-7
2018-9
2018-11
2019-1
2019-3
2019-5
2019-7
2019-9
lkft_test_count Current: 70.9 Mil
Million Tests Each Week
70 Million to date



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LKFT 2.0

- Boot design
  - LAVA jobs all take a rootfs parameter and a kernel parameter
    - If a baked rootfs is required, it is done in the dispatcher
  - Fastboot flash is avoided where possible
  - Use NFS based rootfs where possible
  - LAVA job generation abstracted to its own tool
- Test design
  - Kselftest built along with kernel and overlayed into rootfs via LAVA at runtime
  - Possible to have different rootfs for different tests, just as with kernels
  - Improved parsing for kernel warnings and errors
  - Improved TAP support

LKFT 2.0 cont.

- Reporting design
  - Build (or hopefully find!) reporting and analytics layer
    - Perform cross branch and cross time analysis
  - Generate fine grained, custom reports
  - Support arbitrary frequency
  - Integrate with multiple data sources
  - Results aggregation? (see kcidb project)
  - Automatically identify flaky results. Confidence scoring?